Newsletter of the North American Mycological Association

THE MYCOPHILE

VOLUME 52:3 May-June 2012 www.namyco.org

PRESIDENT'S MESSAGE with Bob Fulgency

(Part II is continued from the previous issue of The Mycophile)

During 2011, Maine's legislature was working on provisions to better regulate the harvesting of wild mushrooms. Late in the session, the legislature passed "An Act to Establish the Maine Wild Mushroom Harvesting Certification Program." The Act contains a Summary that reads as follows:

This bill provides a mechanism for persons who harvest, broker and sell wild mushrooms to obtain appropriate certification in safe identification and handling of wild harvested mushrooms. This bill establishes a mechanism for the Department of Health and Human Services to certify duly qualified individuals as trained in the field of wild mushroom harvesting. The bill requires the Commissioner of Health and Human Services to decide whether to certify individuals based upon the recommendations of the Maine Wild Mushroom Harvesting Advisory Committee, which is created in the bill and whose members include representatives from the Department of Health and Human Services, the Department of Agriculture, Food and Rural Resources, a statewide mycological association, a statewide restaurant association, a northern New England poison control center and the University of Maine and of the wild mushroom foragers and brokers community and the retail food industry, including a food wholesaler and a food preparer. The Department of Health and Human Services is required to provide staff assistance.

The program is intended to be self-funded-with fees not to exceed $200 for training, examining and certifying off a list of over 35 mushroom species originally specified. When the legislature forwarded the bill to the Governor for signature, he decided that the fee was too high and reduced it to only $20 for a five year certificate. Then he allowed it to become law without his signature. Michaeline Mulvey, long time NAMA and Maine Mycological Association member, told me that the fee reduction reduced the chances of success for this program. The Health and Human Services Department will not be able to implement it until such time as adequate funding is provided.

IN THIS ISSUE

President's Message.....pp.1,21
Forays & Announcements.....p. 2
NAMA 2012 Foray.....pp. 3-6
Want to Start a Club?.....pp. 7-8
Macrotyphula contorta.....pp. 9-13
Collecting in Honduras.....pp.13-15
MushRoaming the Andean Amazon.....pp.15-16
Book Reviews.....pp. 17-19
To Serve or Not to Serve.....pp.19-20
Mushroom of the Issue.....pp. 20-21
NAMA Scholarship Recipient..pp. 21-22
Imagine NAMA of the Future....pp.22-23
Hypholoma fulvidulum.....p.24

The State of Iowa has also recently adopted rules covering the harvesting and sale of wild mushrooms. Under its rules the only wild mushroom species permitted to be gathered for sale to the public is the morel. Each mushroom must be identified as a morel and found safe by a certified wild mushroom identification expert whose expertise has been verified and approved. To become a wild mushroom identification expert, one must successfully complete a morel identification course. The fee for the three hour course is set at $45. I spoke with Dr. Mark Gleason, a professor at Iowa State University, who developed the course and he advised me that as of January, 2012, about 200 individuals have taken his course and the licensing process is working well.

Colorado's Department of Public Health and Environment (Department) published a guide in 2000 entitled "Criteria Required for Wild Mushroom Identification Expert". The guide provides - among other things - that a harvester of wild mushrooms is required to have his/her expertise (at identifying a selected wild mushroom genus and species) verified by a recognized mycologist. The Department will then provide the harvester with a letter indicating the intended geographical harvesting area and the approved genus/ species to be gathered. *(Continued on p. 21).*

2012 FORAYS AND ANNOUCEMENTS

July 6 - 8: GSMS Summer Foray, Crawford, Florida. The Gulf States 2012 summer foray will be held at the Wildwood Resort and golf course located in Crawfordville, Florida, 30 miles south of Tallahassee. This has been a wet spring and we hope for good collecting. Our Guest Mycologist is Dr. Gregory Mueller, formerly with the Field Museum of Natural History, and currently with the Chicago Botanical Garden. We also plan to host a student, as we do every summer. Cost of the foray is $235 single/$320 double, including lodging and four meals. More information and a registration form can be found on the GSMS website. For questions contact Patricia Lewis by phone at 409-423-3776 or by email: dandplewis @ gmail.com. For more information, follow this link...

July 17 - 30: SUMMER FUNGAL AND FLORAL TOUR TO TIBET: www. www.danielwinkler.com

July 28-29: FIRST ANNUAL JOINT APPALACHIAN FORAY, Canaan Valley Resort, Canaan Valley, WV with Gary Lincoff, Bill Roody and Donna Mitchell. www.wvmushroomclub.org

August 2 - 5: The NEMF 36th ANNUAL SAM RISTICH FORAY at East Stroudsburg, PA. www.nemf2012.org Registration.htm for further information.

August 16 - 19: THE TELLURIDE MUSHROOM FESTIVAL. www.shroomfest.com

August 23 - 26: NMMS/4cmc FORAY in Pagosa Springs, Colorado. NMMS & 4cmc welcome and encourage NAMA members to visit southern Colorado and enjoy the company and tutelage of our Foray Mycologists Steve Trudell and Britt Bunyard. Field trips will take us into the San Juan Mountains, where we'll visit elevations from 7500 ft to over 11,000. Foray Fee of $100 includes meals but not Lodging. Visit www.mycowest.org for details and registration form.

August 31 - Sept 3: SOUTHWEST REGIONAL FORAY at Southwest Research Station, Portal, Arizona. Chief Mycologist is Dr. Jack States. Foray cost is $260 payable to NAMA. For registration information contact Ann Bornstein, 61 Devon Ct, Watsonville, CA 95076; annstitcher@charter.net or call (831) 786-0782.

September 13 - 16: COMA FORAY in Hebron, CT with Chief Mycologist Gary Lincoff, Dr. Roz Lowen, John Plischke III and Bill Yule. Leon Shernoff and other mycologists will also be attending. Go to www.comafungi.org for a registration form.

Sept. 20 - 23: NAMA WILDACRES REGIONAL FORAY Price is $225 per person. Contact registrar Glenda O'Neil at glendakoneal@yahoo.com or at 423-246-1882 and see website www.namyco.org/events/index.html.

Sept. 27 - Oct. 6: THE NEWFOUNDLAND MUSHROOM ADVENTURE (Canada) 9 days/nights, strong mycology focus with sightseeing, history, culture in this huge, forested, fungi---rich island in the Atlantic. Premium lodgings, food, foray transport. All--- inclusive Cost Share Fee: $2,780 p/p dbl. occ. Organized by NAMA affiliate MycoAficionados of Mexico and Mexican Mushroom Tours. For details, contact Gundi Jeffrey and Erik Purre by email at mexmush@yahoo.com or go to www.mexmush.com.

October 21 - November 4: Foray to Ambruzzo-Molise region of Italy.

November 3-18 Foray to the island of Sardinia. In addition to these two forays to Italy, we discover and sample the cultural offerings and the cuisine of the regions. For information contact Albert Casiero at casciero@wrlc.org

Dec. 13 - 16: NAMA 52nd ANNUAL FORAY at Mission Springs in Scott's Valley, California www.namyco.org. Guest mycologists include Chief Mycologist Dr. Else C. Vellinga, David Arora and others.

MYCOLOGY WORKSHOPS AT EAGLE HILL, ME242 2012: For information go to http://www.eaglehill.us.

Jul 29 - Aug 4: **Mushroom Identification for New Mycophiles - Foraging for Edible and Medicinal Mushrooms** with Greg A. Marley and Michaeline Mulvey

Aug 5 - 11: **Natural History of Fungi and Slime Molds** with Steven L. Stephenson

Aug 19 - 25: **Coastal Maine Mushrooms and Microscopes Foray** with Rosalind Lowen and Dianna Smith

NAMA's 2012 annual foray will be held at Mission Springs, nestled in the redwood-forested foothills of Santa Cruz, a famously laid-back coastal city at the northern edge of the Monterey Bay.

***Phaeomarasmius* will be one of the unusual and uncommon species that we will seek out on the branches of ancient live oaks in Quail Hollow, Santa Cruz.**
Photo and text by Christian Schwarz

Most buildings at the camp are centrally located and within easy walking distance on flat ground (one lodging option is a short drive up a steep hill). The dining, display and meeting halls, and most of the lodging are within 400 feet of each other. For those who are flying to CA, Mission Springs is 60 miles (1:15 hr) from the San Francisco airport and 30 miles (40 min) from the San Jose airport.

We've been working hard at assembling a world-class faculty: UC Berkeley's Else Vellinga will be our head taxonomist, David Arora will lend his legendary field experience and taxonomic expertise, Tom Bruns will lead a microscopy workshop on little-known resupinate fungi, and Tom Volk, Gary Lincoff, Dennis Desjardin, and Rick Kerrigan will also be on hand to inform and enrich our understanding of the ecology, evolution, and identification of fungi. These are just a few of the speakers scheduled for this year's foray; a mushroom dye workshop, mushroom cultivation workshop, and photography seminar will also be on offer for our attendees.

We have obtained very special permission to collect at some of the most impressive of the many nearby state parks and select private lands. The majestic redwood forests of Henry Cowell Redwoods State Park, as well as its Live Oak groves and endemic-rich Zayante Sandhill habitats will be among the primary sites in which we'll focus our collecting efforts. Another expansive park where we'll be foraying is the Forest of Nisene Marks, home of awe-inspiring old-growth redwoods and other mixed evergreens - this park is likely to yield many species that we won't encounter anywhere else during this foray. We will also have access to one of the last three remaining stands of native Monterey Pine forest in the world, where Amanita diversity is at its highest in California and the King Boletes grow as big as barstools.

Mission Springs has a wide array of lodging options, available on a first come, first serve basis. All rooms have closets and dressers and come with bedding and towels. Please state on the registration form your 1st, 2nd and 3rd choice of room so we can best accommodate you.

Standard rooms have 2 to 4 beds and private bathrooms.
Redwood Lodge: 2 double beds per room. Private bath.
Laurel Lodge - 1st floor: 2 single beds per room. Private bath
Laurel Lodge - 2nd and 3rd floors: 3 singles and 1 double bed per room, private bath.
2nd floor is handicap accessible
Wellander - 1st floor: 2 room suites with double in each room or 1 queen and 1 double, 1 bathroom per suite.
Wellander - 2nd floor: 1 double and 1 single in each room, private bathroom.
All rooms have at least one bunk bed as well to accommodate 3 or 4 to a room
Frontier Lodge: 1 double and 1 single per room. Most have 1 bunk also. Private bath.
1 room is handicap accessible. Central lounge with large fireplace.
Must drive about 1/2 mi to central part of facility for all meals and programs to and from Frontier Lodge.

Economy rooms have 2 to 4 beds and shared bathrooms
Sequoia: 2 singles with 2 bunks, shared bathroom for 3 rooms
Fir, Pine, Oak, Hemlock: 1 single and 1 double per room with 2 bunks, private sinks, shared bathroom for 4 rooms
Cedar - 2nd floor only: 2 or 3 beds per room with 1 or 2 bunks, shared bathroom

Pre-foray Mushroom Dyes of North America Workshop: Join North America's premier mushroom dye experts Dorothy Beebee, Susan Hopkins and Alissa Allen for an all-day mushroom dye workshop. This full day workshop is only $65, lunch included.

The North American Mycological Association
Larry Stickney Memorial Foray

Mission Springs Conference Center
Scotts Valley, California
Thursday, December 13th Sunday, December 16, 2012

Ann Bornstein, Registration
61 Devon Ct, Watsonville CA 95076-1160
annstitcher@charter.net
831-786-0782

Complete all 3 pages of this form and return it with your check payable to "NAMA Foray 2012"

Names: _____

Address:_____
City, State,
Zip:_____
Phone:_____
email:_____
Names and club affiliation for name tags:_____

See page 3 for description of room options. Be sure to state 1st, 2nd and 3rd choices.

Foray Registration (non-refundable)	# _____	@	$95	each	$_____
Foray Room and Board: 3 nights and 9 meals					
Standard Room	# _____	@	$210	each	$_____
Economy Room	# _____	@	$135	each	$_____
Single Supplement	# _____	@	$100		$_____
Foray Waiver		@	$0		$_____
Reason _____					
Meal plan if staying offsite (2 lunches, 3 dinners)	# _____	@	$60		$_____
NAMA Trustees meeting: 2 nights, 6 meals					
Standard Room	#_____	@	$130	each	$_____
Economy Room	# _____	@	$ 95	each	$_____
Single Supplement		@	$ 60		$_____
Pre Foray Dye Workshop:					
Standard Room: 2 nights, 6 meals	# _____	@	$ 180	each	$_____
Economy Room: 2 nights, 6 meals	# _____	@	$ 150	each	$_____
Off-site: includes lunch	# _____	@	$ 65	each	$_____
NAMA membership (required if not current)		@	$35		$_____
Late Fee (after October 31)		@	$50		$_____
Mycology student discount		@	-$100		$_____
School _____					_____

Do you require vegetarian meals or have other dietary restrictions? _____

We must have a signed release for each person attending the foray. See next page

Cancellation Policy: The $95 registration fee is not refundable.

Full refund of remainder until October 31
Refund of ½ remainder until November 16
No refund after November 16

Liability Release and Promise Not to Sue

I understand there is some risk in participating in a mushroom foray and conference; all those risks one assumes by being away from home, risks associated with moving about in fields and woods, risks involved in eating wild mushrooms, risks of losing personal property by theft or misplacement, and all other expected and unexpected risks. In registering for or attending this foray, I agree to assume total responsibility during this event for my own safety and well-being, and that of any minor children under my care, and for the protection of my and their personal property. I release The North American Mycological Association (NAMA), its trustees, officers, employees, contractors, and all other persons assisting in the planning and presentation of this event from liability for any sickness, injury, or loss I or any minor children under my care may suffer during this event or as a result of attending and participating. I further promise not to file a lawsuit or make a claim against any of the persons listed above, even if they negligently cause me or my minor children injury or loss. Finally, I agree to hold NAMA harmless from any liability it may incur as a result of any damages to Hinton Training Center property which I may cause. This release and promise is part of the consideration I give in order to attend this event. I understand it affects my legal rights. I intend it to apply not only to me but to anyone who may have the right to make a claim on my behalf.

Signature 1: _____ Date: _____

Print Name 1: _____

Signature 2: _____ Date: _____

Print Name 2: _____

Volunteer Options:

If you can help in any way, please let us know. The volunteer time of our members is what continues to make NAMA forays such a success and great time for everyone. The coordinator will contact you with details prior to the foray.

Display & identification area:

Set up:_____ Assist identifiers:_____ Clean up:_____

Mycophagy:

Set up:_____ Preparation (Sat):_____ Clean up:_____

Bring mushrooms _____

Van Drivers (15 passenger vans) _____ [No special license required]

Other: _____

Room descriptions

All rooms have closets and dressers and come with bedding and towels.

Standard rooms have 2 to 4 beds and private bathrooms.

Redwood Lodge: 2 double beds per room. Private bath.

Laurel Lodge - 1st floor: 2 single beds per room. Private bath

Laurel Lodge - 2nd and 3rd floors: 3 singles and 1 double bed per room, private bath.
2nd floor is handicap accessible

Wellander - 1st floor: 2 room suites with double in each room or 1 queen and 1 double, 1 bathroom per suite.

Wellander - 2nd floor: 1 double and 1 single in each room, private bathroom.
All rooms have at least one bunk bed as well to accommodate 3 or 4 to a room

Frontier Lodge: 1 double and 1 single per room. Most have 1 bunk also. Private bath.
1 room is handicap accessible.
Central lounge with large fireplace.
Must drive about 2 mi to central part of facility for all meals and programs.

Economy rooms have 2 to 4 beds and shared bathrooms

Sequoia: 2 singles with 2 bunks, shared bathroom for 3 rooms

Fir, Pine, Oak, Hemlock: 1 single and 1 double per room with 2 bunks, private sinks, shared bathroom for 4 rooms

Cedar - 2nd floor only: 2 or 3 beds per room with 1 or 2 bunks, shared bathroom

1st Choice: _____

2nd Choice: _____

3rd Choice: _____

Put the following people in the room/suite with me/us

OR: assign roommates: Male _____ Female _____

So you want to start a club.... by Barbara Sommer

"Let's collect dues." We had been managing an informal group of mushroom seekers for five years. We were getting tired, so put out the word on the e-mail list that if help was not forthcoming, we're outta here. Help did come forth. We got a volunteer President who would organize forays and events – a somewhat demanding task as a large group of people rummaging through the underbrush is not welcome in many places. We got a volunteer Treasurer. We had a few bills – a website domain, membership in the national organization, and such. That's when we decided to assess members $10 dues per year.

When accumulating money, one needs a bank account. It was unseemly, not to mention risky, to have checks made out to one of us. The Treasurer checked in with the local credit union (no reason to support the multinationals – keep the money local). They were supportive, but said we needed an EIN (Employer Identification Number) from the IRS. The EIN is a taxpayer ID, the business analog to an individual SSN (Social Security Number). We weren't employers, but the bank required it – probably for tax purposes. The woman at the bank said it could take many months for the government to assign the EIN. I went online and obtained one in a matter of minutes. I was so smug that I immediately went to the credit union to open the account. We had $50 worth of checks. Not so fast. The Treasurer and I (Secretary) had to come in together to sign up for the account.

There was much paperwork. And it had to be done again because the I changed my title from Membership Coordinator to Secretary. It seemed to work better when constructing By-laws. By-laws? Who had thought about By-laws? Some bank literature had indicated that Articles of Association and By-laws were required for the account. There were more decisions to make at the bank. Did we want checks? Did we want a debit card? If so, how many? Did we want paper or electronic statements? What about online banking? There were joint decisions to be made so that both the Treasurer and Secretary could access the account. We slogged through. Security questions? OK –Last cat's name. Need to come up with two more. Lower case or upper case or some combination thereof? Identification confirmation word? Password?

The bank also wanted evidence of tax-exempt status. Flush with the EIN victory, I moved on to apply for non-profit status. Yeah, it was a lot of paperwork and fine-print gobbledygook, but I have an advanced degree and this was the sort of thing that graduate school prepared one for. Read the manual, stupid.

Articles of Association and By-Laws were a requirement. A Google search produced a number of templates. We concocted a set. I failed to consider the fact that our preceding organization, run as an informal club, already had a set of Articles and By-Laws.

The request for exemption was daunting. There are a zillion categories. Are we a 501(c)(5) horticultural organization or a 501(c)(7) social club? Happily, we are not a terrorist organization. The tax code instructions contains the followed admonition: Exemption for terrorist organizations. An organization that is identified or designated as a terrorist organization within the meaning of section 501(p)(2) is not eligible to apply for recognition of exemption.

A more careful reading of the code put us in the 501(c)(7) Social and Recreation Clubs. All we had to do was fill out a four-page form describing the group, its predecessor group, the officers, sources of financial support, groups with which we might affiliate, qualifications for membership, what would happen to assets upon dissolution, and a statement of Revenue and Expenses (which we didn't have yet). In lieu of the latter we were to provide a proposed budget for the subsequent two years. How would we know? We had no idea how many people would be paying dues. Not to worry – we could estimate. The easy-to-fill out PDF was not so easy, but I managed by copying and pasting from a Word draft. It was looking pretty good.

Then I noticed the following at the top of page one.

> A User Fee must be attached to this application. If the required information and appropriate documents are not submitted along with Form 8718 (with payment of the appropriate user fee), the application may be returned to the organization.

Back to the Internet - download Form 8718 (*User Fee for Exempt Organization*) from the IRS website. Whoa! Screeching halt. The fee is $400. **$400!** I couldn't believe it. Couldn't be. Didn't make sense. Made a frantic Google search. Best I could come up with was a Form 8718 from 2006 with a fee of $160. The fee had been raised earlier this year. I don't believe that some one wanted to be mean, but I did find the following to be an ironic touch to Form 8718:

> The time needed to complete and file this form will vary depending on individual circumstances. The estimated average time is 5 minutes. If you have comments concerning the accuracy of this time estimate or suggestions for making this form simpler, we would be happy to hear from you. You can write to the Internal Revenue Service, Tax Products Coordinating Committee, SE:W:CAR:MP:T:T:SIP, 1111 Constitution Ave., NW, IR-6526, Washington, DC 20223. Do not send this form to this address. Instead, see *Where to File* above.

Heck, it took me 5 minutes just to read this note.

At least we won't have to make up the budget for the next two years. My main concern is the bank. Do they really care? Maybe I missed something with the warning of how long it would take to get the EIN. Maybe the bank just cares about good intentions – as when obtaining a mortgage that one cannot afford.

I read a flyer from another credit union. It assured me that "Opening your account is easy. Simply visit any of our offices .... please have the following information handy:"

1. Employer ID Number (EIN)
2. Resolution of Letter of Authority (signed by two or more officers of the organization authorizing the designated individual to open the account)
3. Copy of each of the following:
   a. Organization Chart
   b. Organization By-laws
   c. Governing Rules of the Organization
   d. Articles of the Organization
4. Copy of ONE of the following:
   a. Statement by Unincorporated Association that is filed with the California Secretary of State; must include a registration number.
   b. Statement of Unincorporated Association or comparable document that is filed in a county where the organization owns property.
   c. Registration of unincorporated Non-profit Association filed with the California Secretary of State; must include a registration number
   d. Proof or certification of the organization's official non-profit status tax exemption application or letter

Section 4(d) above lends support to my hypotheses that the banks are not terribly worried about tax-exempt status (they just don't want to be giving a free account to someone making a profit). It doesn't require the exemption, but rather the tax exemption *application*.

Further, we only need to meet <u>one</u> of the criteria under **#4**. What about the State? Back to the Internet. Success -- we can register as an Unincorporated Nonprofit Association in the State of California for $10, and thereby meet criterion 4(c). If push comes to shove from our credit union, we can shift to this one at a cost of $2 admission plus the $10 for the state registration. We can live with that, but I'm guessing there won't be a problem.

The upshot of all of this is that having requested dues, our mailing list of 120 has dropped to twenty. I expect it'll pick up, but nice to be lean.

Epiphany about Macrotyphula contorta

By Andrus Voitk *(Originally published in Omphalina, the newsletter of Foray Newfoundland and Labrador, Vol.11, No. 2, February 6, 2012)*

This article is dedicated To Dave Malloch. Once, when I expressed frustration about the seemingly wide morphologic variation of a purported single species, he told me that fungi were living organisms, and to see if species were the same or different, all I had to do was to study their behaviour. Not very helpful, Dave! My grandchildren have behaviour, dogs have behaviour, but mushrooms just sit there, right?

To learn how wrong I was, let us begin with a brief summary of the taxonomic journey made by two species since their first description in 1790—through three genera, fusing, dividing and recombining along the way, to end up as one. Many workers, all with their own opinions and contributions, have been omitted to give you the bare bones highlights only. Much of this summary was put together with the help of Greg Thorn, who helped with some of the references and tirelessly corrected my erroneous interpretations.

Clavaria

- In 1790 Johan Theodor Holmskiold described two new species, *Clavaria contorta* and *Clavaria fistulosa* (Figure 1).[1]
- In 1904 Franz Xaver Rudolf von Höhnel stated, "*Clavaria fistulosa=Clavaria contorta*".[2]

Clavariadelphus

- In 1950 Edred John Henry Corner reassigned them to a new genus, *Clavariadelphus*, as varieties of the species *Clavariadelphus fistulosus*, viz *Clavariadelphus fistulosus* var. *contortus* (and *Clavariadelphus fistulosus* var. *fistulosus)*.[3]
- In 1958 Pilát recombined them as separate species, *Clavariadelphus fistulosus* and *Clavariadelphus contortus*.[4]

Macrotyphula

- In 1972 Ronald H. Petersen erected the genus *Macrotyphula*, to which he reassigned *C. fistulosus* as *Macrotyphula fistulosa*.[5] He did not make a new combination for a variety, but listed Holmskiold's *Clavaria contorta* as a synonym.
- In 1984 Walter Jülich published new combinations, making Holmskiold's two original taxa varieties of the species *Macrotyphula fistulosa*, viz *Macrotyphula fistulosa* var. *contorta* (and *Macrotyphula fistulosa* var. *fistulosa)*.[6]

Thus, currently within the genus *Macrotyphula* both Holmskiold's taxa are known as one species—either without differentiating between them (Petersen), or as varieties of the same species (Jülich). To consider them as more distantly related, a formal new combination is required. That will happen if evidence supports a classifiable degree of difference at the species or genus level. For now we follow Jülich.

The reason to load your already heavy burden in life with this additional seemingly useless baggage, is that recently I stumbled on events that suggest Holmskiold may have been right in considering the two as distinct and separate species. Here is a summary of my encounters with them (none with one and two winters with the other).

Macrotyphula fistulosa **var.** *fistulosa*

I have never seen this species and we have never recorded it at any of our forays. It is possible that we have missed or misidentified it, but given the many diverse, small, rare and otherwise unusual species that have been collected and identified[7], a much more likely explanation is that this species is either very rare or not present in our province. The few sources of information about it suggest the following: 1) It is a pure saprobe, fruiting on dead deciduous wood and litter on the ground. 2) It usually fruits in the late summer and fall. 3) It is distributed in temperate regions. 4) On the mainland of North America it is more commonly encountered than *Macrotyphula fistulosa* var. *contorta*. 5) Its swollen-topped fruitbodies are gregarious and erect, like organ pipes, possibly the origin of the common name pipe club fungus. 6) The

fruitbodies are hollow inside, giving rise to the epithet (fistulosa=hollow), which is an identifying characteristic of Petersen's genus *Macrotyphula*.

Macrotyphula fistulosa var. contorta

I. Winter, 2010-2011 (Figure 2). I first encountered this species in 2010; it was identified for me from a photo by Esteri Ohenoja.[8] Once alerted, I found the species six times between November 2010 and March 2011, twice on Alnus incana ssp. rugosa and four times on Betula papyrifera. Each time it fruited on a dead branch of a living tree. In the case of the birch, all four were found on high dead branches of trees just felled.
II. December, 2011. On December 7-8, 2011, Newfoundland and Labrador was hit by a weather-bomb, with winds clocked over 165 Km/h. In our coniferous woods trees were blown down, and our birch woods were littered by a remarkable carpet of broken-off dead branches. Ordinarily it may be difficult to tell a newly fallen dead branch from an old dead branch, but this time it was obvious: snowless dark twigs and branches contrasted with the white snow cover below them. Macrotyphula fistulosa var. contorta was fruiting on at least every third branch examined.

Sequentia

While it may be difficult to draw valid conclusions from six encounters with a relatively uncommon fungus because the contribution of chance cannot be excluded, seeing such a massive number of fruitbodies at one time instills much more confidence that a consistent observation is significant. From the two winters (with a few parenthetical additions), the following can be concluded as reasonably reliable:

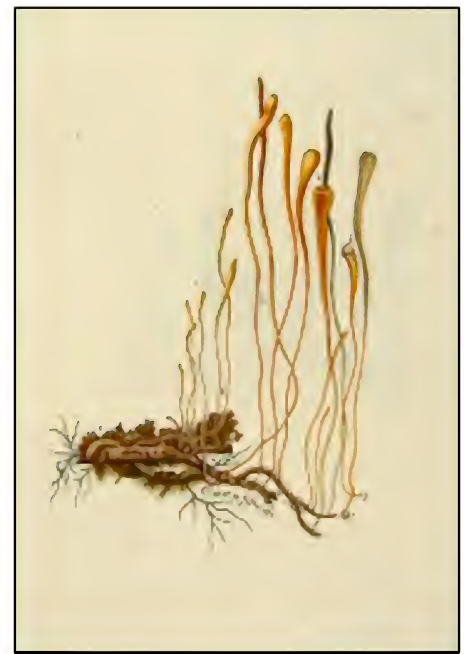


Figure 1. Clavaria contorta, top, and Clavaria fistulosa below, right, from Holmskiold's book. The pictures were commissioned from the artist Johan Neander, and coloured by J. C. Bayer. There seemed to be no doubt in the minds of the author or artists that these were different species. Illustrations from the web are now in

1. Macrotyphula fistulosa var. contorta is a very common fungus species in our province. Its remarkable abundance on recently fallen branches after the storm suggests that it may infest a majority of our mature birch. The likely reason that its commonness has not been appreciated, is because it:
    a. resides high in the crown of mature trees, where it is not readily accessible for viewing to terrestrial human observers,
    b. fruits during winter, when most people are not looking for mushrooms, and
    c. is rather small and nondescript, escaping notice of all but the few fanatics with an eye perverse to the point of depravity for odd fungi.
2. It is primarily an inhabitant of birch in our province, very rarely found on alder and possibly on other deciduous hosts. (I examine alder very often, so finding only two collections after several years suggests that alder is a very infrequent host.)
3. It thrives in our northern climate.
4. It prefers to fruit during thaws in the winter. (All encounters to date have been between November and March; I have not seen it on recently felled birch in summer.)
5. *Macrotyphula fistulosa* var. *contorta* fruits exclusively on dead branches of living trees.

Figure 2. Macrotyphula fistulosa var. contorta. Above: Mature fruit bodies on standing birch. Note great variation in appearance and the finely granular coating of fresh fruit bodies, not seen one week after separation from tree. Two to three weeks later no evidence of these mushrooms could be seen and no new ones appeared. Left: Mature fruit bodies on birch one week after the branch was broken by storm. Right: Young fruit bodies on standing alder.

It is this last observation that deserves our closer attention. The rare privilege to see hundreds of downed *Macrotyphula fistulosa* var. *contorta* at one time in several birch woods commands heedfulness to their message. Singly barely audible, their massed voices shouted out, "Remark our common choice of substrate: a dead branch of a living tree!" Although it may seem that *Macrotyphula fistulosa* var. *contorta* decomposes dead deciduous wood in the air as its cousin does on the ground, reflection suggests this is not so. I examine brush piles, branches, stumps or logs left over from birch logging sites quite often without having ever found the species on dead wood. Every specimen fruits exclusively on dead branches of living trees, and none on dead wood alone. Ergo, *Macrotyphula fistulosa* var. *contorta* cannot survive on dead wood alone and requires the presence of a living tree. This suggests very strongly that its food comes from the living tree, not from digesting the dead branch, and that this fungus is an obligate parasite of living hardwood. It makes its living by either digesting live hardwood and absorbing the resulting sugars, or taking up the tree's sugars found in the sap. Therefore, its mycelium must be distributed through both live and dead tree. When a smaller branch dies (possibly being choked off or sucked dry by the mycelium), the organism sends out fruit bodies to the surface. The energy to create them must be transported by mycelium from the more proximal living tree tissues. Break that connection and the

organism, dependent on living tissue for its sustenance, dies off, explaining why it is never found in brush piles or dead logs. In this regard its behaviour differs from *Plicaturopsis crispa*, for example, which may also be found on dead branches of living trees. The difference is that *Plicaturopsis* will also happily fruit on fallen dead wood, suggesting that it may not be an obligate parasite, if a parasite at all, but possibly a decomposer of dead wood.

If true, these conclusions represent an epiphanic insight into the nature of *Macrotyphula fistulosa* var. *contorta* in the light of the current taxonomic concept of this taxon. It would be unusual for an organism that makes its living only one way to be conspecific with another organism that makes its living a different way. Hence, an obligatory parasite is unlikely to be of the same species as a saprobe. *Macrotyphula fistulosa* var. *fistulosa* is known as a pure saprobe. It decomposes dead hardwood and litter. The seemingly exclusively parasitic nature of *Macrotyphula fistulosa* var. *contorta* differs so significantly from that of a saprobe, that it is very unlikely to be conspecific with or a variety of *Macrotyphula fistulosa* var. *fistulosa*.

The little else we know about the two also suggests that they are distinct. Macroscopically *Macrotyphula fistulosa* var. *contorta* is misshapen and the other straight. The context of *Macrotyphula fistulosa* var. *contorta* is usually solid, thus not fitting well with the epithet "fistulosa", which means hollow. Or, for that matter, with Petersen's *Macrotyphula*: one of the four main identification features for the genus was its hollow nature.[5] Microscopically, according to Schild, an expert of this group, who has studied hundreds of collections, Holmskiold's *Clavaria contorta* has significantly longer spores than the other.[9] The taxa seem to have a different geographic distribution, *Macrotyphula fistulosa* var. *contorta* being found in colder climates. The fruiting time also differs, *Macrotyphula fistulosa* var. *contorta* fruiting during the snowy season. (Mushrooms using wind as a vector for spore dispersal must finish fruiting before they get covered with snow, if terrestrial, while their arboreal colleagues are free to fruit throughout the winter in periods of thaw.)

All these differences suggest genetic divergence between these two taxa that is incompatible with conspecificity. Unless we are dealing with a species other than *Macrotyphula fistulosa* var. *contorta*, (e.g. a North American "sister species", or, for that matter, a complete misidentification) the odds are high that the two are very different species, as Holmskiold, and later Pilát, thought; it is even possible that his *Clavaria contorta* may belong to a genus other than the current *Macrotyphula*!

We have had the good fortune to interest Andy Methven, who has studied this group of organisms for a long time, to pursue this matter with further work, including genetic marker analyses. Stay tuned.

Parting shot This story shows the difficulty we run into with our scientific ranking systems, especially when it comes to rarely encountered species. The story is also a good example of how classification by behaviour helps us understand the nature of fungi. An opportunity such as I had is very rare. What the irascible Lloyd called "name shuffling",[10] is an opinion. Most uncommonly encountered species are seldom seen in their natural habitat, and taxonomic opinions are primarily based on examination of scattered dried herbarium collections. Corpses have form, but no behaviour.

Addressing this confusion, Breitenbach and Kränzlin[8] offer what must surely be a tongue-in-cheek explanation: the reason "certain authors" consider Pilat's *Clavariadelphus contortus* and Petersen's *Macrotyphula fistulosa* conspecific is that the contorted shape is merely the result of the poor mushroom's being "checked in its development by unfavourable conditions during growth". These "certain authors" might just as well use their unsubstantiated "explanation" to suggest that *Morchella elata* is the same as *Russula paludosa*, but just turned out black and gnarled because of unfavourable growth conditions! In fact, the causative linking of unhappy childhood to a subsequent twisted personality has been transferred from mycology to the behavioural and social sciences with great success. It is now the accepted pathogenesis behind some people's turning out well-balanced and good against all odds, thus becoming total misfits in our otherwise dysfunctional society.

References

Holmskiold JT: Beata ruris otia fungis danicis impensa, 1:29. København. 1790.

von Höhnel FXR: Eine mykologische Exkursion in die Donau-Anen von Langenschönbihl bei Tulln. Österreichische botanische Zeitschrift, 54:425-439. 1904.

Corner EJH: A Monograph of Clavaria and allied genera. Annals of Botany Memoirs 1. London UK; Oxford University Press. 1950.

Pilát A: Übersicht der europäischen Clavariaceen unter besonderen Berückningstignung der tscheckoslowakishen Arten. Sb. narod. Muz. Praze 14B:129-255. 1958.

Petersen RH: Notes on clavarioid fungi, XII. Miscellaneous notes on *Clavariadelphus* and a new segregate genus. Mycologia 64:137-143. 1972.

Jülich W: Die Nichblätterpilze, Gallertpilze und Bauchpilze. Gams H: Kleine Kryptogrammeflora, 2:1 Jena. 1984.

Voitk A, Malloch D, Burzynski M: Foray Newfoundland & Labrador annotated cumulative species list, 2003-2011. <http://www.nlmushrooms.ca/index.php?page=species-lists>. Last accessed 7 January, 2012.

Voitk A: Cover picture. OMPHALINA 1(6). 2010.

Breitenbach J, Kränzlin F: Fungi of Switzerland 2:340. Verlag Mykologia, Lucerne. 1986.

Lloyd CG: The Geoglossaceae. Mycological Notes. 5. 1916

COLLECTING IN HONDURAS

by Lawrence Millman

Thanks to the narcotics trade, Honduras currently has the highest murder rate of any country in the world. This would explain why there hasn't been much recent mycological work there. Still, documented visits by mycologists in the past were few and far between, too.

Alfonso Murrill reputedly visited Honduras a hundred years ago, but his "visit" seems to be based on the fact that he worked on collections from British Honduras, now Belize. Jack Rogers collected in Honduras in the 1970s, while Greg Mueller and Rolf Singer made a flying visit in the late 1980s. More recently, Priscilla Chaverri spent several weeks investigating the country's microfungi. And United Fruit periodically brought down U.S. plant pathologists to inspect the local banana crop for fungal pathogens. Otherwise, the country would seem to be a mycological terra incognita.

I wanted to visit Honduras myself, but before doing so, I had to procure several permits, including a collection permit and an export permit. Soon I found myself mired in a bureaucracy that was at once inefficient and rapacious. Once I agreed to pay a certain price, the country's Department of Forestry would raise that price. In Costa Rica and Belize, permits usually cost no more than $50; in Honduras, I watched my permit fees rise from $150 to $300 to almost $600. A government that gets big kickbacks from *narcos* seemingly expected to get a big kickback from a myco, too. Since I refused to abide by the corrupt rules arbitrarily created by a corrupt bureaucracy, I wasn't able to bring specimens out of the country, collect in a national park, or collect on public land. Goodbye to growing specimens in a culture upon my return or doing serious microscopic work with them. Goodbye, too, to my plan to focus primarily on Pico Bonito National Park, a 700 square mile forested area that's more or less pristine except for a patchwork of marijuana plantations.

But all was not lost: I decided to stay in a research cabin at Pico Bonito Lodge, a facility adjacent to the Park, and do my collecting on its substantial grounds. Rather than take or send specimens home, I would exhibit them for the Lodge's guides and visitors.

When I arrived in January, 2012, the country was in the midst of a prolonged drought. Among locals, every other phrase seemed to be *muy seco.* In both dry and humid tropical forests, there are considerably fewer ectomycorrhizal fungi than in temperate forests. But now I noticed almost no mycorrhizal species - a few *Tricholomas*. On the other hand, there were plenty of wood inhabiters, including such common neotropical polypores as *Datronia caperata, Coriolopsis rigida, Earliella scabrosa, Hexagonia tenuis,* and *Trametes lactinea*. The ascos included *Scutellinia* and *Xylaria* species, *Phylacia poculiformis,* and *Cookeina tricholoma,* a beguiling species whose delicately hairy apothecium makes it look like a punk toddler.

In Central America, you can write *"Ficus* species" beside "substrate" in your collection notes, and you'll usually be correct. *Ficus* was, in fact, a dominant tree type in this part of Honduras. One of my most interesting discoveries was a hypogeous species, probably an *Alpova,* attached to the roots of a recently toppled *Ficus*. But there were also plenty of non-native trees from the time when much of the area around the Park had been used for agricultural purposes. I found the gray corticioid species *Grammothele fuligo* on a dead African palm as well as several *Auricularia* species on the branches of dead or dying coffee trees...a common substrate for *Auriculariales* around the world.

Meanwhile, the government bureaucrats were trying to make it hotter for me than the outside temperature. The Lodge kept getting emails and faxes that indicated I was collecting without a permit. Which, of course, I was on private property, for which I didn't need a collecting permit. To the Lodge's credit, they deleted the emails and tore up the faxes, including one that I would have wanted to keep; it referred to me as a criminal. To be labelled a criminal in such a corrupt country -- what splendid irony!
For identification purposes, I used R.G. Dennis's *Fungi of Venezuela*, Leif Ryvarden's exemplary works on tropical and neotropical polypores, Roy Halling and Greg Mueller's *Common Mushrooms of the Talamanca Mountains, Costa Rica*, and the two volumes of *Costa Rica Macrofungi* by Milagro Mata, Roy Halling, and Greg Mueller. I'd been told that the Lodge had a microscope, so I didn't bring my own. Stupid of me! The item in question turned out to be a dissecting scope. Thus I found myself relying mostly on morphological features in making (or not making) identifications, with the result that the aforementioned books were even more useful than I expected them to be.

Toward the end of my stay, I found what seemed to be a fruiting of *Echinodontium tinctorium.* This surprised me, since I knew that the species had never been sighted as far south as Central America.

I immediately imagined a paper in *Mycotaxon* that dramatically revised the geographical boundaries of the species. But my stubbily hydnaceous specimen turned out to be *Daedalea sprucei,* which had been named for the great 19th century botanist and botanical explorer Richard Spruce. For more information on this relatively uncommon pantropical species,

Lentinus velutinus by Larry Millman

see *A Preliminary Polypore Flora of Africa,* by L. Ryvarden et al, p. 306ff.

During one of my walks, I encountered a Honduran botanist who was studying a lignum-vitae tree. He said that deforestation in his country was occurring at a rate of almost 3,000 square kilometers a year; at that rate, he added, all the country's broadleaf forest would be gone in twenty years. Hearing his words, I realized this: it's all the more important for mycologists to visit Honduras *now,* and that they somehow get permission to collect. Otherwise, there will be no documentation of the fungal species that once might have been found here. Larry's web site: www.lawrencemillman.com

RARE MOMEMNTS IN REMOTE PLACES
Ambling through the Andean Amazon

By Larry Evans & Daniel Winkler

What mushrooms would you expect to find in the worlds most remote and intact ecosystem? Perhaps some familiar and fascinating genera like Amanita or Boletus, maybe a Russula? Sorry to disappoint you, but there are hardly any ectomycorrhizal species growing in the rainforest, most mushrooms are feeding on decaying biomass – like troops of colorful and gracile Marasmius or hosts of conks and leathery shelves. And why wait for your food source to die? Cordyceps fungi feed on insects while they are still moving! By now you probably have a hunch that you do not need to conjure up some fantastic rainbow colored fungal creatures that look like something out of a long wild photoshop session involving lots of caffeine. Yes, of course, some of these grow in the Amazon, and what's more someone has probably tried eating them used them to cure something or color their dull post-modern reality.

Cordyceps Grasshopper by Daniel Winkler

Do we ever find new mushrooms, and who did we name it after? Over the last 7 years, the Madidi Mushroom Study has collected, photographed, dried, and curated well over 1000 mushroom specimens. These represent only the specimens that survived the humid heat and ever present mycophagous insects and molds, attempts of being dried in the bread oven at Chalalan, bagged with mothballs and carried on someone's backpack to the Bolivian National Herbarium in La Paz, a few days hard travel uphill. Even more collections and photographs are "orphans" that bother the herbarium keepers with their absence of a reliable correlation between the collected biological material and the photographs. However thanks to the work of Danny Newman, and BNH staffers, the 2012 collections are now being properly curated, verified, and available for study through the BNH. Very few of the dozens of unique collections we have made ever make it to the stage of being formally described. In accordance with the Andes Protocol, which regulates the transfer of biological material, all specimens remain in Bolivia.

After finding more mushrooms parasitizing on insects during my first week of collecting in Bolivia than I had seen in my previous 20 years of collecting, I alerted Daniel Winkler, to the Amazonian abundance of this bizarre group of

which he is researching in Tibet. He and I have since teamed up to lead tours to both the Bolivian and Ecuadorian Amazon Rainforest. It is amazing what can be found when we slow down a bit and look closer, black stalked-bright red pin head size fruiting bodies of *Ophiocordyceps australis* growing out of ants, white and orange *Cordyceps locustiphilia* growing out of colorful big locusts, *Akanthomyces* embalming a sphinx moth and growing weird antenna like structures to spread its conidiospores and the list goes on and on. The variety of insectivorous fungi in these two places overlaps, with the Ecuadorian jungle being even more diverse. The diversity, biochemistry, and value of these entomophagic fungi alone makes Madidi national park a gem of biodiversity worth preserving, and still it is currently threatened by oil development and a hydroelectric project.

Some of the amazing and curious fungi our Mushroaming group has uncovered includes sampling 3 species of the tree ear fungus, one of them, *Auricularia delicata*, with an intriguingly reticulated underside; for the first time we found a fleshy *Polyporus* that was stout in stature and seemed pressurized by its high moisture content. We marveled at *Polyporus* or *Favolus tenuiculus*, a common species throughout the neotropics that is eaten by the local people and called "chicken breast" mushroom (although it is a bit more leathery); and a few varieties of the oyster mushrooms that grow locally, including the beautiful pink Pleurotus djamor.

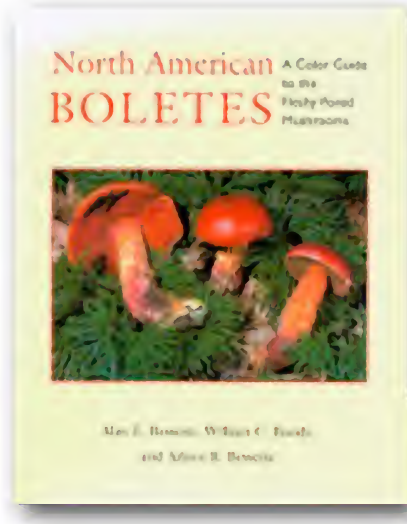
One story of medicinal mushrooms stands out, because it saved the life of our friend and guide Yovanni during a bout with dengue fever. *Pycnoporus sanguineus*, aka (*Trametes*) *cinnabarinum*, the Blood-red Bracket now recognized to be the same species found in Canada and Eurasia is saturated with intense brick-red orangeness throughout its cap, context, and pores. When brewed into a tea and taken orally this mushroom has the reputation for breaking a fever. Not only in South America, where some but not all ethnic groups utilize it, but in traditional North American and Chinese medicine as well. It strikes me that this fungus is never found in the primary rainforest, but only in areas around human civilization on downed wood. Same with the local black *Daldinia*, a relative of King Alfred's Cakes, which is used to counteract muscle cramps and hence also known as Cramp balls. My personal suspicion is that these fungi were transported by people during the original settling of these continents millennia before.

Cookeina tricholoma by Daniel Winkler

And of course there is an overwhelming diversity of fungal eye candy in the jungle. Notably, we encountered an amazing teal blue ascomycete growing in an undisturbed arroyo near Coroico, the colorful and stunningly structured, but minute *Favolaschia*, astonishing fruitings of coral-like Ramaria or Lentaria, purplish buttons of cute shiitake-like *Lentinus*, bright scarlet cups of *Cookeina* equipped with seductive eye lashes (*C. tricholoma*), and the eerie black branches, antlers and fingers of a host of Xylaria, some of them exuding red nectar, all growing out of fallen logs. But the visuals aren't the real miracles here. The real potential to develop fungi as a source of edible protein, to use fungi to decontaminate thousands of hectares lost to oil pollution, to develop medicines and tourism, to decompose plastics as the recent find of *Pestalotiopsis microspora* that made the news indicated and to provide alternative ways to produce paper pulp, all promise a cleaner, greener path to the future.

Daniel has a gallery of Amazon Mushroom photos on his Mushroaming.com webpages and Larry shares photos macro and microscopic images on his Fungaljungal.com. They are planning on returning to mushroam the Andean Amazon in early 2013.

North American Boletes: A Color Guide to the Fleshy Pored Mushrooms

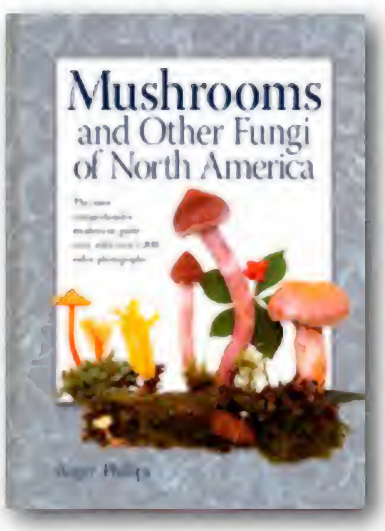


Alan E. Bessette, William C. Roody, and Arleen R. Bessette
2000 (first paperback edition 2010) / ISBN 978-0-8156-3244-3 / 400 pp.
Syracuse University Press (http://www.SyracuseUniversityPress.syr.edu)
$45.00 (paper)

Like several other of the Bessette books published by Syracuse University Press, this one was originally available only in hardcover. Finally, after 10 years, the Press has made it available in a more affordable paperback edition. As far as I can tell, the only changes from the original version involve the content of the dust jacket/back cover. Otherwise, everything seems to be the same, down to the typo in the Acknowledgments section. The color of some of the photos differs slightly from the original version, but not enough to matter. Hopefully the availability at a more reasonable price will allow many more mushroomers access to this useful volume.
My review of the hardback version appeared in *The Mycophile* 42(2): 13-14 (March-April 2001) and is posted online at MykoWeb (http://www.mykoweb.com/).

Steve Trudell

Mushrooms and Other Fungi of North America
Roger Phillips
2005 / ISBN 1-55407-115-1 / 319 pp.
Firefly Books Ltd. (http://www.fireflybooks.com/)
$39.95 (cloth)
A few years ago, while at a mushroom festival on the Olympic Peninsula, someone showed me a printout from an Internet site where Roger Phillips's 1991 book, *Mushrooms of North America*, was offered for sale at $350. I never found out whether the seller got his/her price, but I was astounded and decided that I should find a safe to keep my copies in. So, given the apparently high demand, it is not surprising that this popular volume has been re-printed—by a new publisher, with a new cover, and under a slightly revised title. Other than that, changes to the original are minimal. I noticed a couple of *Phaeocollybia* names had been changed but that several incorrectly identified marasmioid species still carried the incorrect names. The "greening" of the gills of many brown-spored species also remains a problem but, overall, the quality of the photo reproductions seems better than in the original—they are a bit crisper and brighter.



This has been a popular and useful volume primarily because of the large number of species illustrated with good-quality color photographs. However, a number of the identifications are wrong and the distribution information often is off the mark, so it must be used with some caution. Perhaps this re-release will encourage some enterprising soul to compile a list of updates and corrections as was done for Phillips's similar book for Europe and Great Britain.

Denis Benjamin's review of the original version appeared in *The Mycophile* 32(4): 6-7 (July-August 1991).
Steve Trudell

The Wild Table: Seasonal Foraged Food and Recipes Connie Green and Sarah Scott
2010 / ISBN 978-0-670-02226-7 / 343 pp.
Viking Studio (a member of the Penguin Group)
$40.00 (hardcover)

When first author Connie Green learned that it was I who would review her book, she commented in an e-mail message, "Oh Steve, I do wish you ate mushrooms." Truth be told, I do eat mushrooms, although admittedly only on occasion and usually without much enthusiasm, unless of course they are candy caps in mycochef Patrick Hamilton's bread pudding—no coincidence that my favorite mushroom dish is a dessert. Nonetheless, Connie need not have been concerned, as I don't think one needs to be a confirmed mycophagist to evaluate a book about wild foods (it isn't just about mushrooms).

Connie is the founder and "head huntress" of Wine Forest Wild Mushrooms, a Napa-Valley area enterprise that provides wild-gathered foodstuffs to the restaurant trade. Thus, she is, among other things, (gasp!) a commercial picker. Second author Sarah Scott is a highly regarded chef, who has been associated with Robert Mondavi Winery for many years.

In general, this is a large-format compilation of commentaries on 34 wild food items, including many mushrooms, and recipes that incorporate them, organized by five seasons—spring, summer, Indian summer, autumn, and winter. A brief introduction and even briefer but important discussion of foraging fundamentals and etiquette precede the main part. Wild pantry, wild calendar, brief lists of resources, and three indexes—one listing vegetarian recipes, a general one for all of the recipes, and a third for miscellaneous stuff—complete the book.

The spring foods include morels, ramps, fiddleheads, conifer shoot tips, nettles, salad greens (purslane, chickweed, miner's lettuce, *etc.*), and elderberry flowers. As is the case in all five seasonal sections, each of the foods receives a general introduction—its scientific name(s), general information about where it can be found and when, and interesting tidbits of natural history and folklore. This concludes with "kitchen notes" that provide guidance on cleaning, storage, preparation, and so forth. All of this is written in very lively and entertaining fashion and accompanied by attractive color photographs. The spring recipes range from rather simple (basket-grilled morels) to more complex (twice-baked ramp and goat cheese soufflés) and seem to me to be quite followable. For vegetarians, there is a spring fry of fiddleheads, ramps, and asparagus with Meyer lemon aioli and buckwheat waffles with spruce tip syrup. For obligate carnivores, Mateo's roasted veal chop with morel and cacao sauce.

Summer foods include lobster mushrooms (those "blazing orange floozies of the mushroom world"), meadow and fairy ring mushrooms, gray morels (*Morchella tomentosa*), fennel, nopales, sea beans (the saltmarsh plant, *Salicornia*, widely known as 'pickleweed' before the chefs re-named it to be more pleasing to diners' ears), and summer berries. Examples of recipes are "breakfast of champignons": lobster mushroom and rock shrimp eggs Benedict with dazzling hollandaise, bacon-wrapped duck-stuffed morels, auntie Nemo's sea bean and potato salad, and fresh mulberry ice cream.

Indian summer foods include chanterelles, puffballs, corn smut, blewits, rose hips, and huckleberries. Examples of recipes are Louisiana-style chanterelle hash, cuitlacoche and squash blossom quesadilla, rose hip and pistachio baklava, and huckleberry lemon pudding cake.

Autumn foods include king bolete, maitake, matsutake, *Sparassis*, juniper berries, elderberries, candy caps, and black walnuts. Examples of recipes are porcini[3]: porcini-dusted rib eye with porcini butter and grilled porcini, foil-wrapped matsutake with white soy and ginger, cauliflower mushroom and king trumpet spring rolls, and butternut squash and candy cap mushroom crème brûlée.

And, finally, winter foods include black trumpets, hedgehogs, winter chanterelle (yellow foot), dandelions and curly dock, persimmons, and cactus fruit. Examples of recipes are black trumpet mushroom and Yukon gold potato

gratin, hedgehog mushroom and turkey pot pie, milk-braised pork shoulder with yellow foot mushrooms, and persimmon praline trifle.

In the wild pantry section you will find recipes for a variety of basics such as spreads and condiments like ramp pesto, pickled sea beans and chanterelles, porcini powder and Wine Forest Mushroom rub, mushroom stock, infused vinegars, porcini butter, syrups, candy cap sugar, wild booze such as chanterelle vodka, and a variety of techniques for preparing wild mushrooms. Wild calendar shows month-by-month occurrence of the various foods in both eastern and western North America.

Given the preponderance of the NAMA membership who delight in eating mushrooms, this ought to be a popular book. It's attractive, engagingly written, contains good advice, and could well expand mycophagists' horizons from wild fungi to other wild foods. I can certainly recommend it even though I am not likely to be preparing porcini[3] any time soon.
Steve Trudell

Book Review Central—NAMA's Literature Committee

One of NAMA's committees that remains little known to probably the bulk of the membership is the Literature Committee, which is chaired by Steve Trudell. The committee has several charges in the NAMA Policy Manual but the most important one is to provide reviews of books, DVD's, software programs, and the like for publication in *The Mycophile*. If you learn of a new book (or DVD or whatever) that you feel would be of interest to other NAMA members, or if you would like to write a review, please contact Steve (mycecol@u.washington.edu) so that he can coordinate acquisition of the items and submission of reviews to the newsletter.

To Serve or Not to Serve

By Bob Sommer

Those of us who collect wild mushrooms for the table face difficult decisions when it comes to preparing dishes for guests. As hosts we are cognizant of the consequences of faulty identification and assess risks accordingly. It seems morally acceptable for us to operate under a "forager beware" ethic when it comes to eating what we find in the forest and carry home. But can the same be said for our dinner guests? Is it morally correct to subject non-mycophiles to risks that we are willing to assume for ourselves? It's true they see us healthy and smiling, obviously having survived previous mushroom dinners. This provides some reassurance that they will survive too and probably enjoy this dinner apart from lingering suspicions that everyone makes mistakes some time, and of course they can sue if something goes terribly wrong. This is a litigious society and suing friends (What are friends for?) is part of modern life. The latter realization feeds our "host be cautious" ethic.

Should we check with a lawyer before issuing dinner invitations when wild mushrooms are to be served? That would be expensive and probably unproductive, as the risks vary according to mushroom variety, quantity consumed, guest physiology, and psychological proclivities. Serving a small mushroom garnish to an overweight guest, particularly one who is both rotund and jolly, is unlikely to result in serious harm but preparing a main course containing wild mush- rooms to be consumed by a thin nervous person is much riskier. Very few lawyers are familiar with the intricacies of mycophagy, and those who are, might suggest that guests be required to sign a release of the sort mushroom societies demand of foray participants. Whether signing a release would reduce the guest's enjoyment of the meal should be considered.

Another possibility parallels the situation of meals prepared for guests with strong dietary preferences (very common in California). We poll prospective dinner guests on food inclinations in advance. Some may be plain vegetarians while others are ovo-lacto vegetarians. A few will eat white-fleshed but not red-fleshed meat, and if you invite Michael Pollan to dinner, he may insist on foods you have killed with your bare hands. One

can avoid any taboo items altogether or prepare duplicate dishes with and without whatever the visitor avoids. This requires additional labor in the kitchen plus clear and understandable labeling in the guest's preferred language.

Further complicating menu choice is the possibility of hysterical responses to safe dishes. A large amount of one's response to foods is psychological, which is why food companies spend money on research into packaging, food names, and advertising campaigns. Some folks are apprehensive about the idea of eating any wild foods including berries, miner's lettuce, or fiddleheads growing along the trail. When they see us picking mushrooms in the woods, they warn us to be careful, not certain if we are suicidal or homicidal. These are the same people who send us clippings whenever there has been a mushroom poisoning anywhere in the world. If you have dinner guests like this, the prudent course is to keep all foraged foods off the menu, Michael Pollan notwithstanding.

This raises the question of a suitable menu when the psychological proclivities of dinner guests, perhaps new neighbors or coworkers, are unknown. Fortunately there are personality tests for risk-taking, such as the Zuckerman-Kuhlman Personality Questionnaire or ZKPQ which measures a person's desire for novel and exciting experience. Instead of requiring prospective guests to sign a release in advance of the meal, you can ask them to complete the short-form of the ZKPQ and screen out all low risk-takers. If you are a low risk-taking host, you can demand both the signed release and completion of the ZKPQ. Measuring testosterone levels, which have been found to correlate with risk-taking, of prospective guests would be onerous, but maybe no more so than consulting a lawyer.

If these caveats leave you confused, check with the Human Subjects Committee of the your mushroom club.

About the Author: Bob Sommer is a retired professor from UC Davis. He writes the "Easy Edibles" column for Mushroom the Journal and is the co- author with Mike Davis and John Menge, of the forthcoming Field Guide to Mushrooms of Western North America to be published by the University of California Press. His mushroom watercolors also appear on the MSSF website.

MUSHROOM OF THE ISSUE

by Don W. Johnston

Gyromitra gigas/montana (Snowbank False Morel)

This is a mushroom that many fear, some revere. Its long standing reputation as a delicious edible mushroom in the Intermountain West has had serious doubt cast upon it by recent publications. It has been accused of being potentially deadly poisonous, but the point of contention appears to be in whether or not it contains a significant concentration of gyromitrin, which is a known toxin. If you choose to eat this mushroom, be aware of possible risks. That it grows in predictable fashion, and in collectable quantity is not at all in question. This mushroom is often the very first sign of life as receding snowbanks disappear from our mountainsides.

Identification: Convoluted and wrinkled in it's entirety is a fitting description. The cap is colored a rich brown to tan, becoming darker with age. It often has closed recesses where forest debris will become trapped. The stem, also convoluted, is almost white, and is always very broad in relation to the cap diameter. It is rarely less than half the diameter of the cap. It is never hollow, but is always chambered and convoluted in its interior.

One of its common names is 'walnut', which is a very accurate description of the appearance of the cap.
Specific characteristics:
1. Strongly convoluted and wrinkled, tan to brown colored cap. 2. Pale to white stem.
3. Blocky stature, stem almost as wide as cap.
4. Chambered and convoluted stem interior (not hollow).
Growth Habits: Gigas will seldom be found more than about 20 feet from a snowbank, or more than two days after a snowbank has completely disappeared. They will never be found very far from conifers, usually fir. The snowbank habitat results in a very limited season to find them, unless you follow the snow melt up in elevation. In Utah that translates into a June thru early July growing season. Some snowbanks last later, but they rarely have gigas growing around them.
© Mushrooms of Utah 2001

(The President's Message continued from p.1) The harvester must maintain records of this activity for two years, identifying his/her buyers and giving each buyer additional information about the mushrooms and the supplier (i.e., normally the harvester).

Oregon has guidelines similar to those of Colorado covering the harvesting and sale of wild mushrooms. One of the requirements is that the qualifications of the mushroom identifier be stated in a "Wild Mushroom Buyer Verification" form, but the rules do not establish what criteria, if any, are to be applied in making a determination of the identifier's qualifications. Washington State is currently working on its regulations and in that connection has named 18 species as being approved for harvesting. Each mushroom must be identified; however, the rules do not establish any qualification standards for becoming a mushroom identifier other than requiring the name, signature, business name, mailing address, email and telephone number of the person doing the identification.

Here in Minnesota work continues on the development of a regulatory framework to oversee the harvesting and sale of wild mushrooms while safeguarding the public. The University of Minnesota Extension, the Minnesota Mycological Society, and other interested parties are working with the Departments of Health and Agriculture to develop a proposal for submission to state authorities. Under a planned program, classes on identifying certain species of wild mushrooms would be offered for a reasonable fee. Classes would also cover other important topics related to the safe harvesting and sale of wild mushrooms.

No doubt other states and provinces are struggling with these issues, but I believe that eventually there will be in place workable and rational regulatory systems that will give the public confidence that the wild mushrooms they purchase are safe for consumption; and that will also protect the interests of the harvesters and businesses buying from them. The program developed by Maine with a little tweaking can serve as a model for others to follow; it is comprehensive and covers most of the issues that have so hampered the development of practical regulations intended to protect the public. In closing, I would appreciate hearing from you about what your state or province may be doing with respect to regulating the harvesting and sale of wild mushrooms. My email address is: robjoful@comcast.com.

NAMA Memorial Fellowship Recipient: Dimitri Floudas

This year's recipient of the NAMA Memorial Fellowship given in memory of Larry Stickney was awarded to Dimitri Floudas. He was selected by the Graduate Student Fellowship Committee of MSA to receive the prestigious NAMA Memorial Fellowship for 2012. Dimitri received his bachelor's degree in Biology from the National and Kapodistrian University of Athens in 2006. During the last year of his bachelor's degree he completed his diploma dissertation under the supervision of Dr. Zacharoula Gonou-Zagou and Dr. Evangelia Kapsanaki-Gotsi, where he studied taxonomy and diversity of

Agaricomycetes in central Greece and performed screening of basidiomycete isolates for their bioremediation potential, focusing particularly on lignicolous species.
After his graduation he participated in two research projects at the University of Athens. His participation in the first project involved monitoring the diversity of lignicolous basidiomycetes in four distinct forest ecosystems in Greece, while during the second project he was testing the enzymatic ability of *Phanerochaete chrysosporium* and *Pleurotus ostreatus* to degrade recalcitrant organic phenolic compounds of oil mill waste water. Dimitri joined David Hibbett's lab at Clark University in August of 2008 and since then he has been working on his PhD thesis focusing on the evolution of wood degrading systems in Agaricomycotina using comparative genomics. Additionally, he is working towards a modern taxonomic study of the genus *Phanerochaete,* a diverse and taxonomically perplexed genus in Polyporales, under the PolyPEET NSF grant.

NAMA welcomes four newly affiliated clubs: the Fraser Valley Mushroom Club in Mission, BC; the Mycological Association of Greater Philadelphia; the Peninsula Mycological Circle in Redwood City, CA; and the Cumberland Mycological Society of Crossville, Tennessee.

Imagine the NAMA of the Future

By David Rust

Imagine NAMA as a true umbrella organization which acts as a clearinghouse for taxonomy, mycophagy, toxicology, and cultivation. NAMA's new book of recipes is a hit on the NY Times best seller list. Since most journals are now online, *McIlvainea* has become one of the "go to" publications for new species and breakthroughs in mycological research — used by young academics to get their name out in the world of mycology. NAMA has developed strong ties with poison control centers across the US and has created educational (and multilingual) outreach programs with a broad appeal. As a result, incidents of serious and fatal mushroom poisonings have dropped sharply. By creating brochures for the veterinary community, dog poisonings are reduced as well. Parks and land managers now regularly post information about mushrooms, with warnings about local poisonous fungi. The new NAMA mushroom kiosk is very popular with rangers and naturalists.

This vision is simply an expansion of ideas that people in NAMA have expressed in the past few years plus a few of my own. Whether these goals are attractive or even feasible remains to be discussed, but each would require focus and effort to make them happen. NAMA couldn't pursue these lofty ideas without input and support from its affiliated clubs, and collaboration with other organizations.

Science has become "cool" and NAMA produces weekly science café-style podcasts where the best professional mycologists tell the world about their scientific discoveries. Amateur mycologists add first-person narratives of their mushroom adventures from the field. Research papers on various topics are archived on the NAMA website and citations to these academic works soar. NAMA's Facebook page has over a million 'likes.' Because of increased participation, Mushroom Observer easily surpasses 100,000 observations.

A team of dedicated ecologists research new bioremediation methods to restore areas severely damaged by unregulated industries. These young scientists promote a new understanding of the role of fungi in our exquisitely balanced ecosystems, and NAMA serves as a resource to the EPA. Our annual forest clean up and restoration program brings out thousands of volunteers.

Through NAMA's collaboration with other green-oriented organizations, major forestry colleges, and the US Forest Service, our woods and grasslands are no longer treated as museums to be explored only from asphalt trails — forests are now places where people are actively engaged in citizen science. Foraging is a rediscovered art, and people feel a much stronger connection to nature. Stewardship of natural resources has become accepted policy for state and local governments and access to forests is seen as a right of all citizens. People are more concerned with using natural resources wisely than extracting wood, minerals and hydrocarbons.

NAMA's focus on science has brought increased funding from private foundations to promote research and clinical trials of the medicinal qualities of fungi. The discovery of previously unknown compounds in mushrooms and lichens has improved the health of millions around the world.

A new emphasis on NAMA's endowment has led to five new scholarships given annually to deserving students in mycology. At the same time, in partnership with local clubs, NAMA has helped establish endowed professorships at major universities where no department of mycology previously existed.

To foster learning for members of affiliated clubs, NAMA has developed a series of regional intensive mycology courses based on the model taught by mycologists like Dr. Andy Methven at Highlands Biological Station in North Carolina and Dr. Dennis Dejardin at the Sierra Nevada Field Station in California. These popular one or two week-long courses are designed to immerse students in taxonomy and identification. Online classes have also been created on a variety of topics, including mushroom dyes and paper making, cultivation, introduction to fungi, basics of tree identification and forestry, mycorrhizal relationships, lichens, endophytic fungi, and more, under the general concept of a "Mushroom University," currently offered by COMA and Gary Lincoff. Registration for these classes is open to current NAMA members only.

At the same time, NAMA is deeply immersed in working with professional mycologists on the North American Mycoflora project. Targeting several regional areas of fungal diversity, NAMA holds quarterly forays in areas where additional study is needed. Several herbaria have been vastly expanded with new equipment and funding to preserve fungal specimens for future research. There's even a NAMA 'app' which will be the beginning of the online version of the mycoflora.

Could this come to pass?

We're all scientists at heart. We learn how to safely navigate the forest. We learn to identify mushrooms for the table and which fungi to avoid. We appreciate the beauty of fungi, and easily integrate our knowledge using technical tools in our everyday lives. This vision of a future NAMA is admittedly utopian, but we can't get from here to there until we take the first step…

2012 Annual Photo Contest Eligibility: The contest is open to all paid-up NAMA members. Non-members may enter if a separate check for dues is enclosed ($35) with the entry. Images that have previously won (including honorable mention) are not eligible. Closing date: All entries must be received by the Contest Director on or before September 4, 2011. Allow at least one week for mailing. For entry form and information see:

http://www.namyco.org/photography/index.html

North American Mycological Association
c/o Ann Bornstein
61 Devon Court
Watsonville, CA 95076

Address Service Requested

Newsletter of the North American Mycological Association
THE MYCOPHILE

During one of last year's Italy forays organized by Albert Casciero of Maryland, an especially rare mushroom was found : ***Hypholoma fulvidulum***. It was the first find reported in Italy (region Lazio). There have been only other two earlier reports of the existence of this mushroom which appeared in Scotland.